



## Asthma and Climatic factors in Kermanshah

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### Abstract

**Background:** asthma is considered as one of the significant challenges of public health. In this study, the association between climatic factors, with increasing the number of hospitalization of asthmatic patients in Kermanshah was examined.

**Methods:** This study is both a cross-sectional and ecological analysis. A number of asthma hospital admissions were collected during 2008-2009 from 7 major hospitals of Kermanshah. At this time, data of meteorological data (temperature, air pressure, relative humidity and rainfall) were obtained from Meteorological Organization of Kermanshah. In order to measure the correlation between the parameters, Pearson's bivariate correlation was used and to determine the relationship of hospital admission of asthmatic patients with climatic factors, GLM (Generalized Linear Model) and Poisson regression at a significance level (P value = 0.05) were applied.

**Results:** Bivariate correlation showed that climatic factors have mutually a significant correlation with each other. Temperature with pressure and humidity were correlated by a factor of -0.61 and -0.8, respectively; also, pressure and humidity by a factor of 0.51 have a significant positive correlation. The Results of Poisson regression showed the relative risk of asthma hospitalization was (95% CI: 0.953-0.994) for temperature.

**Conclusion:** Based on the results among climatic factors, low temperature and cold weather were significantly associated with asthma exacerbations. However, due to the multi-factorial nature of asthma, there are other factors that also play a major role in the development and exacerbation of asthma hospitalization.

**Keywords:** weather condition, asthma, Iran